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RESEARCH ARTICLE

The Influence of Social Media Usage on Student Anxiety Levels

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ABSTRACT

Social media plays a significant role in university students' lives, offering opportunities for communication, academic collaboration, and entertainment. While it provides benefits, excessive use has been associated with increased anxiety levels, especially in young adults. This study aims to examine how different types of social media use—such as social interaction, entertainment, and academic achievement—influence anxiety levels among Nangarhar University students in Afghanistan. A quantitative, cross-sectional research design was employed with 105 undergraduate students at Nangarhar University. Data were collected using a self-administered online questionnaire, which included measures for social media usage and anxiety (GAD-7). Descriptive statistics, Pearson correlation, and linear regression were used for data analysis. The study found that social media use for entertainment significantly predicted higher anxiety levels. In contrast, social interaction and academic use of social media showed no significant effect on anxiety. The findings suggest that entertainment-driven engagement with social media contributes to emotional strain, while social interaction and academic use appear to have a neutral impact. This study highlights the potential negative impact of entertainment-focused social media use on student anxiety. The findings suggest the need for balanced social media use, increased digital literacy, and enhanced mental health support within university settings.

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Introduction

In the digital era, social media has become an integral part of students' daily lives, serving as a primary platform for communication, academic engagement, and entertainment. While these platforms offer several benefits, such as real-time connectivity, collaborative learning, and stress relief, there is growing concern about their impact on mental health. A substantial body of research has linked excessive or problematic social media use to increased anxiety levels among young adults (Abi-Jaoude, Naylor, & Pignatiello, 2020; Vannucci, Flannery, & Ohannessian, 2017; Keles, McCrae, & Grealish, 2020).

Social media affects students in multiple ways. On a social level, these platforms foster connectivity and inclusion, but they also contribute to social comparison and the fear of missing out—two psychological phenomena that are strongly associated with anxiety (Przybylski et al., 2013; Oberst et al., 2017; Appel, Gerlach, & Crusius, 2016). Academically, platforms like YouTube, WhatsApp, and Facebook are commonly used for learning and collaboration (Al-Rahmi et al., 2018; Tang & Hew, 2020).

Despite these advantages, constant online connectivity can be distracting, potentially harming academic performance and increasing stress (Rosen et al.,

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2013; Manca & Ranieri, 2016; Elhai et al., 2017). Similarly, using social media for entertainment, when done in moderation, can be relaxing, but overuse may disrupt sleep, impair time management, and exacerbate anxiety (Woods & Scott, 2016; Levenson et al., 2017; Andreassen et al., 2017; Dhir et al., 2018). Furthermore, exposure to curated content that promotes unrealistic standards of success and beauty can negatively affect self-esteem and emotional well-being (Appel et al., 2016; Huang, 2017; Meier & Schäfer, 2018).

Given these multifaceted influences, it is essential to examine how different aspects of social media—such as social interaction, educational engagement, and entertainment—are related to anxiety among university students. This analysis is particularly relevant in contexts like Afghanistan, where students face additional psychological challenges. For example, recent research at Nangarhar University has highlighted significant psychological distress related to environmental stressors. Studies by Haqyar et al. (2024) found strong correlations between climate change anxiety and symptoms of depression, generalized anxiety, and PTSD. Another study showed that even awareness of environmental threats, such as droughts or earthquakes, significantly impaired students' cognitive-emotional functioning and overall well-being (Haqyar et al., 2024). These findings suggest that Nangarhar University students are especially vulnerable to psychological stress, even without direct exposure to environmental disasters.

While global attention on the psychological impacts of climate change has grown, the potential harm of social media use has received comparatively little empirical attention, especially among students in Afghanistan. Although recent studies have documented anxiety related to environmental concerns at Nangarhar University, the mental health effects of social media use in this population remain largely unexplored. To address this gap, the current study investigates the relationship between social media use and student anxiety, focusing on three key areas: social interaction, entertainment, and academic engagement. By exploring these connections, this research aims to provide deeper insights into the digital stressors affecting Afghan university students and offer strategies for promoting mental health and digital well-being.

Methods and Materials

Research Design

This study employed a quantitative, cross-sectional research design to examine the psychological effects of social media usage on student anxiety levels at Nangarhar University. This design enabled the collection of numerical data that could be statistically analyzed to identify patterns and correlations. By using a cross-sectional approach, the study captured a snapshot of students' social media habits and anxiety levels at a single point in time. Although this method is suitable for identifying associations between variables, it does not establish causation.

Participants

The target population for this study consisted of approximately 9000 students at Nangarhar University during the 2023–2024 academic year. Using convenience sampling, 105 students who had internet access and received the questionnaire voluntarily participated by completing an online survey. Since classes were ongoing, it was practical to conduct the survey online using Google Forms. The questionnaire was distributed over a three-week period through student group chats, with the support of lecturers from 13 different faculties. Participants were informed that all responses would be kept confidential and used solely for academic research purposes. Although the participants were accessible in person, the online method was chosen for several scientific and practical reasons. First, it allowed for more efficient data collection, reducing time and logistical burdens for both researchers and participants. Second, it ensured anonymity and helped minimize potential response bias, encouraging more honest and accurate responses—especially considering the sensitive nature of the topic, such as anxiety. Finally, the online format enabled broader and more consistent outreach across multiple faculties, which would have been significantly more time-consuming and less effective through in-person data collection.

Data Collection Tools

1. Social Media Usage Questionnaire

The social media usage questionnaire used in this study was developed by the researcher in the Pashto language, based on a review of existing literature. It consisted of nine

items categorized into three key dimensions: social interaction, entertainment, and educational achievement. Each item was rated on a four-point Likert scale, ranging from "Strongly Agree" to "Strongly Disagree." The questionnaire was then reviewed by five professional psychology instructors to assess content validity, and revisions were made based on their feedback. The instrument demonstrated high internal consistency, with a Cronbach's alpha of 0.90, indicating strong reliability and suitability for academic research.

2. Anxiety Assessment Tool

To measure anxiety, the Generalized Anxiety Disorder Scale (GAD-7) was used. This standardized tool is designed to assess symptoms of anxiety and consists of seven items, each rated on a four-point frequency scale: 0 for "Not at all," 1 for "Several days," 2 for "More than half the days," and 3 for "Nearly every day." The total score ranges from 0 to 21, with higher scores indicating more severe levels of anxiety. The original version of the scale, developed and validated by Kroenke et al. (2007), demonstrated excellent internal consistency, with a Cronbach's alpha of 0.93. For the present study, the scale was translated into Pashto and then reviewed by five professional psychology instructors to ensure content validity. Modifications were made based on their feedback. In this study, the scale demonstrated strong reliability, with a Cronbach's alpha of 0.89, confirming its appropriateness for use among Afghan university students.

Data Analysis

All data were entered and analyzed using SPSS version 24. Descriptive statistics (means and standard deviations) were used to summarize the participants' responses and provide an overview of social media usage and anxiety levels. Reliability testing, using Cronbach's alpha, was conducted to assess the internal consistency of the research instruments. Pearson correlation analysis was used to examine the strength and direction of the relationship between social media usage and anxiety. Finally, linear regression analysis was performed to determine the extent to which social media usage could predict anxiety levels among students. The results were organized and presented in tabular form to clearly illustrate the key findings.

Results

This section presents the findings from the regression analysis conducted to assess the relationship between different types of social media usage and student anxiety levels at Nangarhar University.

Table 1: Descriptive Statistics and Correlation Coefficients of Study Variables

Variable	Sub-Dimension	Standard Deviation (SD)	Mean	1	2	3	4
Social Media Usage	Social Interaction	1.76	9.25	1			
	Entertainment	2.18	6.58	0.16	1		
	Academic Achievement	1.37	10.64	0.30**	-0.146	1	
Anxiety		4.50	4.67	0.34	0.210*	-0.70	1

Table 1 presents the **mean values, standard deviations** and **Pearson correlation coefficients** among the key variables analyzed in the study: social media usage across three dimensions (social interaction, entertainment, academic achievement) and student anxiety levels. The highest mean usage was observed for **academic achievement** (M = 10.64, SD = 1.37), suggesting that students frequently use social media for educational purposes. **Social interaction** had a moderately high mean score (M = 9.25, SD = 1.76), indicating regular engagement for maintaining social connections. **Entertainment use** showed the lowest average (M = 6.58, SD = 2.18), though variability was the highest in this category. The mean anxiety level reported among students was **4.67** (SD = 4.50), indicating mild anxiety overall in the sample. Pearson correlation results indicates a **moderate positive correlation** was found between **social interaction** and **academic achievement** ($r = 0.30$, $p < 0.01$), suggesting that students who use social media for social purposes may also benefit academically. Social interaction and anxiety also showed a **moderate positive correlation** ($r = 0.34$), though

not statistically significant in regression analysis. A **weak but statistically significant correlation** was observed between **entertainment use** and **anxiety** ($r = 0.210$, $p < 0.05$), implying that higher entertainment use is associated with increased anxiety. **Academic achievement-related social media use** showed a **slight negative correlation with anxiety** ($r = -0.70$), indicating a possible protective or neutral role, though this relationship was not statistically significant.

Table 2: Regression Coefficients for Hypothesis Testing

Hypothesis	Variable	Standardized Coefficient (β)	Standard Error (SE)	Significance (p-value)	Result
H1	Social media use for social interaction does not significantly predict student anxiety levels.	0.015	0.267	0.888	Accepted
H2	Social media use for entertainment significantly and positively predicts student anxiety levels.	0.201	0.208	0.049	Accepted
H3	Social media use for academic achievement does not significantly predict student anxiety levels.	-0.045	0.342	0.667	Accepted

Table 2 presents the results of a multiple linear regression analysis conducted to test the influence of three dimensions of social media usage—social interaction, entertainment, and academic achievement—on students' anxiety levels. The standardized regression coefficient ($\beta = 0.015$) and a high p-value ($p = 0.888$) indicate that social media use for social interaction does not significantly predict anxiety levels among students. The relationship is weak and statistically insignificant, suggesting that using social media to maintain social connections may not directly influence anxiety in this context. Hence, $H_1.1$ is accepted as a null-effect finding.

The coefficient for entertainment-related social media use ($\beta = 0.201$) is statistically significant ($p = 0.049$). This positive relationship indicates that students who use social media for entertainment purposes are more likely to experience higher levels of anxiety. The result supports the hypothesis that entertainment-driven use of social media is a meaningful predictor of anxiety. $H_1.2$ is therefore accepted. The coefficient for academic achievement-related use of social media is negative ($\beta = -0.045$) but not statistically significant ($p = 0.667$). This suggests that social media use for educational purposes does not significantly impact student anxiety, either positively or negatively. Thus, $H_1.3$ is accepted as showing no effect.

Discussion

The aim of this study was to investigate the influence of different types of social media usage—social interaction, entertainment, and academic achievement on student anxiety levels among Nangarhar University students. The findings contribute to the growing body of literature on the psychological impacts of digital behavior in academic contexts.

The most notable finding of this study is the significant positive relationship between social media use for entertainment and student anxiety levels. This aligns with existing research by Woods and Scott (2016), who found that increased use of social media for leisure, particularly at night, was associated with poor sleep quality, higher anxiety, and lower self-esteem. Similarly, Andreassen et al. (2017) noted that social media addiction, often driven by entertainment, is a significant predictor of psychological distress. This suggests that when used excessively for entertainment, social media may contribute to anxiety through mechanisms such as overstimulation, comparison with idealized content, or disrupted routines.

Contrary to some prior studies, this research found no significant relationship between social media use for social interaction and anxiety. While the correlation was positive, it was not statistically significant. This finding diverges from that of Vannucci et al. (2017), who observed that increased engagement in social networking was associated with greater anxiety in emerging adults, often due to Fear of Missing Out and social comparison (Przybylski et al., 2013). One possible explanation for this discrepancy could be the cultural or contextual factors at Nangarhar University, where students may use social

media more for maintaining real-life relationships than for seeking validation or online popularity.

The study also found no significant relationship between academic use of social media and anxiety, although a slight negative correlation was observed. This is in line with research by Shrestha and Adhikari (2024), who found that social media, when used for academic purposes, could support learning and collaboration without increasing stress. However, the lack of a significant relationship in this study suggests that educational engagement through social media might neither buffer nor amplify anxiety, but rather play a neutral role depending on how it is integrated into the student's study habits.

Notably, this study builds upon earlier research conducted at Nangarhar University on climate change anxiety, such as Haqyar et al. (2024), which established strong associations between environmental concerns and mental health issues like depression, anxiety, and PTSD. Unlike climate anxiety—which showed a clear psychological toll—this study shows that only specific types of social media engagement (entertainment) significantly contribute to anxiety, emphasizing the complexity of digital influences compared to environmental stressors.

This study has several limitations. It was conducted at a single university with a relatively small sample size, limiting the generalizability of the results. The use of self-reported questionnaires may have introduced response bias. Additionally, the cross-sectional design does not allow for conclusions about causality between social media use and anxiety. The study also focused on only three aspects of social media usage, excluding other possible influencing factors like screen time, sleep patterns, or personality traits.

Conclusion

The findings provide valuable insights into how students' engagement with digital platforms influences their mental well-being. All three hypotheses were supported, with results showing that social media usage for entertainment purposes significantly and positively predicts student anxiety levels. In contrast, social interaction and academic use of social media were not found to be significant predictors of anxiety, suggesting a more neutral psychological impact in these areas. Based on these findings, several practical and research-oriented recommendations are proposed to help mitigate the negative psychological effects of social media usage, particularly within the academic environment of Nangarhar University. Students should be encouraged to maintain balanced social media habits, especially by limiting entertainment-focused usage, which was found to significantly contribute to anxiety. Instead, emphasis should be placed on using social media for educational purposes, such as academic discussions, resource sharing, and collaborative projects. Future research should involve larger and more diverse student populations to validate these results. Additionally, longitudinal and mixed-method studies are recommended to gain deeper insights into how social media usage patterns evolve over time and their long-term effects on mental health.

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